INSTALLATION

ICS210 Series Camclosure®

Integrated Camera System

C2491M-D (8/06)

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Regulatory Notices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC, Class A (black-white, EIA and CCIR cameras - except auto iris models)

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

FCC, Class B (color, NTSC and PAL cameras - except auto iris models)

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Description

The ICS210 Series Camclosure® is a wedge style integrated camera system that is quick and easy to install. The system is designed to mount directly to a wall or ceiling, or to a corner with the ICS210- CM corner mount.

ICS210 system is shipped fully assembled. System components include a cover, base with camera and lens, and a mounting plate (refer to Figure 1).

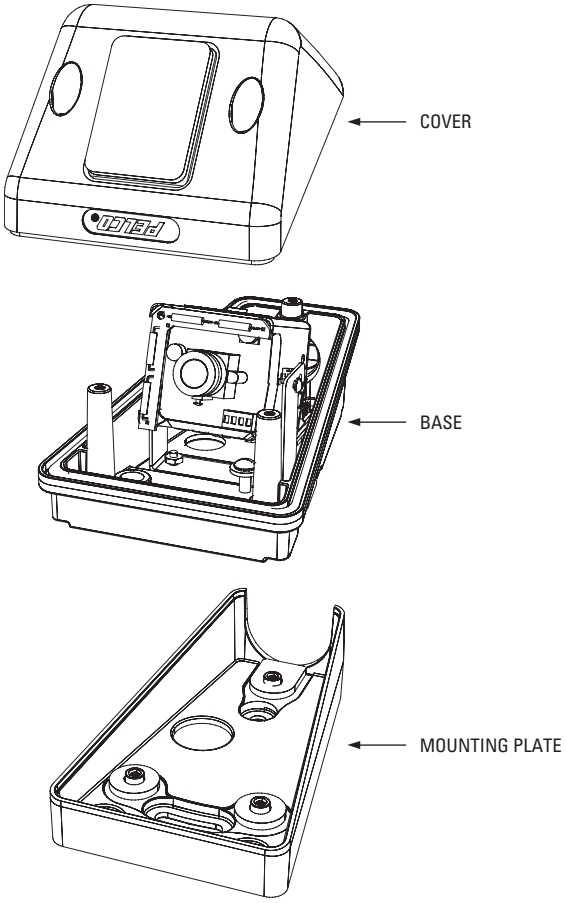


Figure 1. Exploded View of System Components

Installation

PREPARE MOUNTING SURFACE

1. Remove the cover of the ICS210. Use the screwdriver bit that is provided to loosen the three tamperproof screws, and then lift the cover from the base.

2. Remove the camera assembly from the base by removing the Phillips screws on each side of the camera assembly (refer to Figure 2).

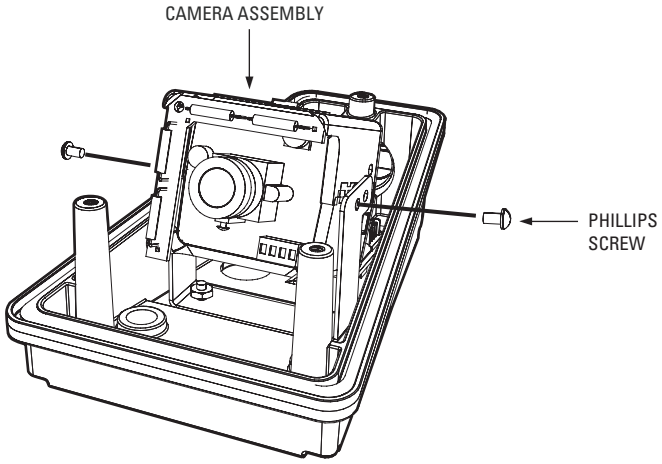


Figure 2. Removing Camera Module

3. Remove the base from the mounting plate by removing the three 8-32 x 0.375-inch screws and lock washers. Lift the base from the mounting plate and set the base, screws, and lock washers to the side.

4. Select a fixed or adjustable mounting pattern (refer to Figure 3 and Figure 4). Using the mounting plate as a template, mark the wire feedthrough and fastener hole positions on the mounting surface. Prepare the holes for the installation.

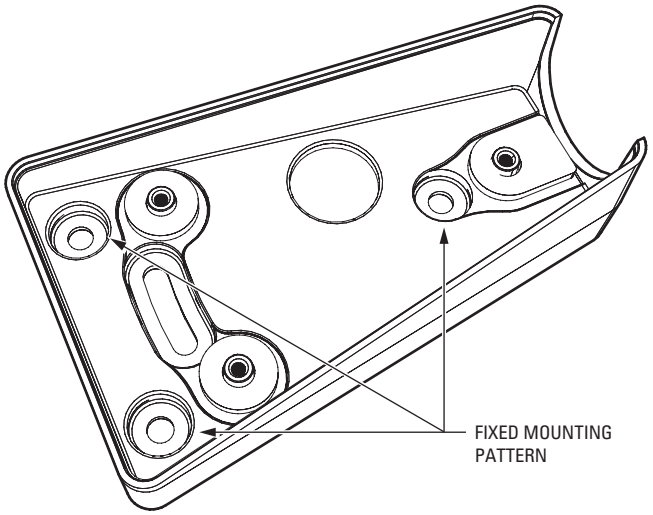


Figure 3. Fixed Mounting Pattern

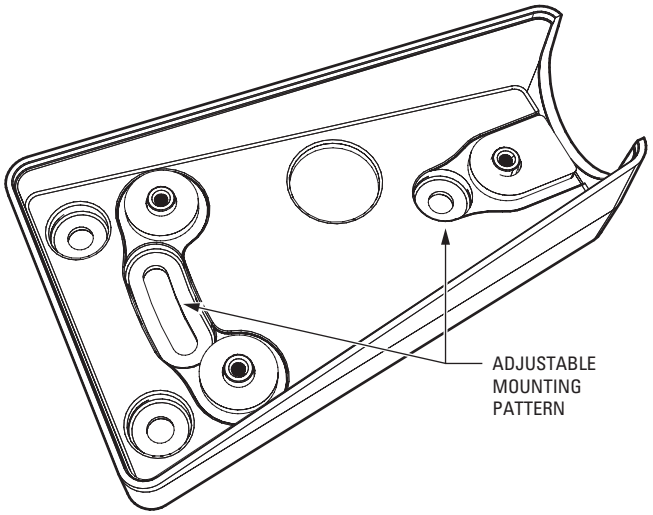


Figure 4. Adjustable Mounting Pattern

INSTALL BASE

WITHOUT CONDUIT

1. Pull the power and video wiring for the camera through the mounting surface and then through the wiring hole in the mounting plate. Fasten the mounting plate to the mounting surface with #8 stainless steel screws (not provided) of the appropriate length.

   Adjustable mounting pattern only: Adjust the angle of the base before tightening the mounting hardware.

2. Connect the power input wires to the power wires located on the bottom of the ICS210 base. Refer to the following to connect the power wires:

   ### 24 VAC:
   Connect power to the red and blue wires. The black wire is not used.

   ### 12 VDC:
   a. Connect +12 VDC to the red wire and ground to the black wire. The blue wire is not used.

   b. Reset the voltage jumper located on the camera power board inside the base of the Camclosure (Refer to Figure 5). Remove the jumper from AC position and reinstall the jumper on the DC position.

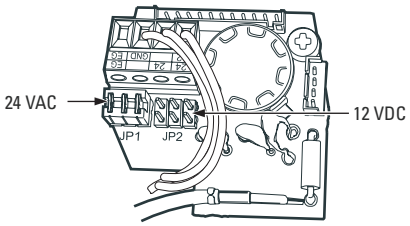


Figure 5. Voltage Jumper Settings

3. Connect the video cable. Make sure the boot covers the BNC connectors.

4. Push the power wires and video cable back through the mounting surface. Line up the mounting holes in the base with the mounting holes of the mounting plate. Attach the base to the mounting plate with the three 10-32 x 0.625-inch screws and lock washers previously removed.

WITH CONDUIT

1. Prepare the conduit for the installation.

2. Fasten the mounting plate to the mounting surface with #8 stainless steel screws (not provided) of the appropriate length.

   Adjustable mounting pattern only: Adjust the angle of the base before tightening the mounting hardware.

3. Using a blunt tool push out the wiring plug in the bottom of the base (refer to Figure 6). Pull the wiring inside the base.

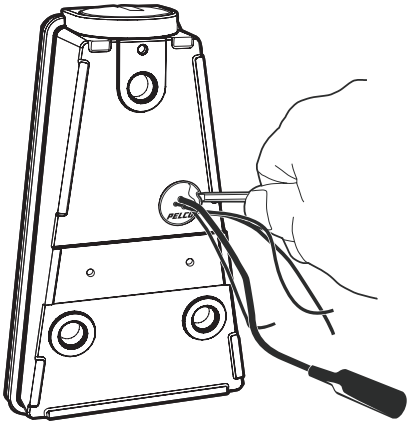


Figure 6. Removing the Wiring Plug

4. Insert the hole plug that is supplied into the hole in the base of the Camclosure (refer to Figure 7).

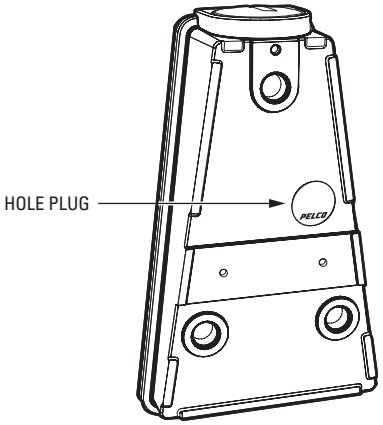


Figure 7. Installing the Hole Plug

5. Pull wiring through the conduit opening (refer to Figure 8):

   a. Use a 1/16" hex head wrench to loosen the hex head inset screw.

   b. Use a screwdriver to remove the conduit cover.

   c. Pull the power wires and video cable through the conduit opening.

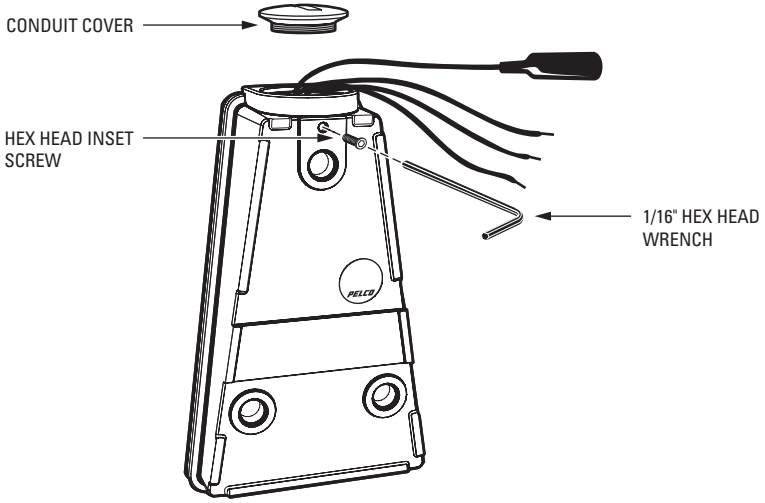


Figure 8. Removing the Conduit Cover

6. Install a 0.75-inch (1.91 cm) conduit connector in the conduit opening. Line up the mounting holes in the base with the mounting holes of the mounting plate. Attach the base to the mounting plate with the three 8-32 x 0.375-inch screws and lock washers previously removed.

7. Attach the base to the conduit and then connect the power input wires to the power wires of the ICS210 Camclosure. Refer to the following to connect the power wires:

   24 VAC:

   Connect power to the red and blue wires. The black wire is not used.

   12 VDC:

   a. Connect +12 VDC to the red wire and ground to the black wire. The blue wire is not used.

   b. Reset the voltage jumper located on the camera power board inside the base of the Camclosure. Refer to Figure 5. Remove the jumper from AC position and reinstall the jumper on the DC position.

8. Connect the video cable. Make sure the boot covers the BNC connectors. Push the power wires and video cable back through the conduit fitting.

REINSTALL CAMERA MODULE

Reinstall the camera module. Refer to Figure 9. Make sure the top of the camera is oriented properly. On the lens housing, look for the label that says TOP.

⚠ **WARNING:** To prevent damage to the camera or lens, the camera must be installed in the proper hole of the mounting bracket. If the camera is not installed in the correct hole, the window of the enclosure may be forced against the lens.

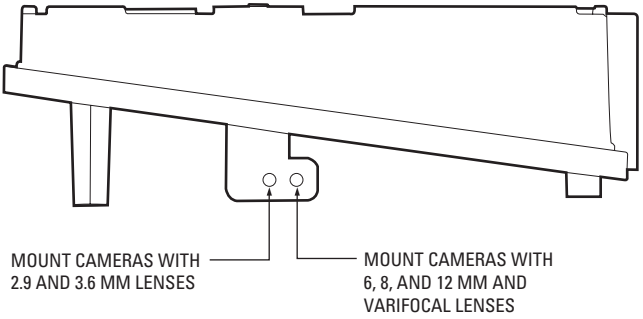


Figure 9. Camera Installation

ADJUST POSITION

1. Turn on power to the camera and monitor.

⚠ **WARNING:** Heater elements could be hot! When camera power is on, use caution when adjusting the camera. This applies to all models.

2. **Varifocal lens only:** Loosen the focal length and focus locking screws (refer to Figure 10). Adjust according to scene detail. Retighten the screws.

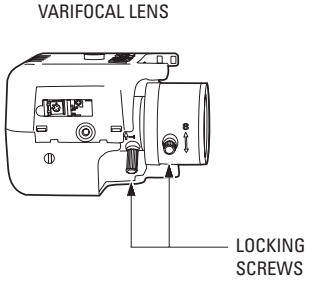


Figure 10. Varifocal Lens Adjustment

3. Adjust the position of the camera.

REPLACE COVER

Place the cover of the ICS210 onto the base of the unit. Using the screwdriver bit (supplied), tighten the three tamperproof screws.

NOTE: Remove the foam from the inside of the cover before installing the cover.

Adjustments (Color Camera Only)

If you have a color camera, it is set up at the factory and normally requires no adjustments. Sometimes, however, adjustments may be necessary.

1. Remove the cover using the supplied 1/8-inch hollow screwdriver bit.
2. Adjust the vertical phase, iris level, focus, or switch settings (refer to procedures below).
3. Replace the cover.

VERTICAL PHASE (24 VAC OPERATION ONLY)

Adjustment is required if there is vertical roll when switching between two cameras.

1. Reverse the 24 VAC connections on one camera. If both cameras are connected to the same transformer, this should solve the problem.
2. If reversing the connections does not solve the problem, or if cameras are connected to different transformers, turn the adjustment screw on one camera (while switching as rapidly as possible between the two camera views) until the switching is clean and there is no vertical roll. If more than two cameras are out of synchronization with each other, choose one camera and synchronize all others to it.

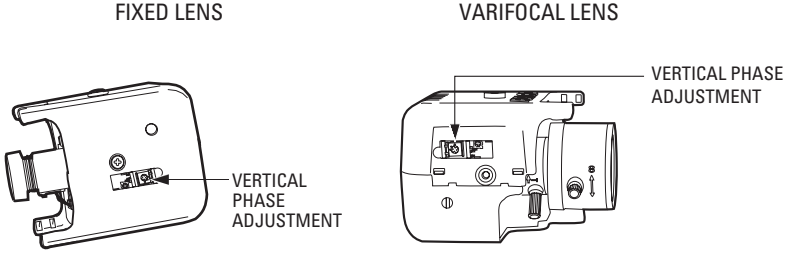


Figure 11. Vertical Phase Adjustment

AUTO IRIS LEVEL ADJUSTMENT

If you have a varifocal lens or fixed focal length lens with an auto iris, you can adjust the iris level setting to increase or decrease brightness.

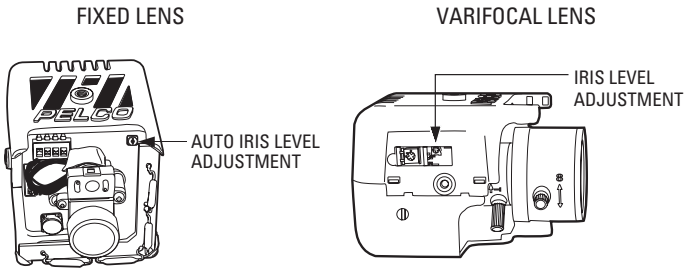


Figure 12. Iris Level Adjustment

FOCUS ADJUSTMENT FOR FIXED FOCAL LENGTH LENS WITH AUTO IRIS

To adjust the focus, do the following:

1. Loosen the locking screw on the bottom of the lens. To loosen the screw, it may be necessary to remove the heater board. Refer to Figure 14 and the accompanying steps.

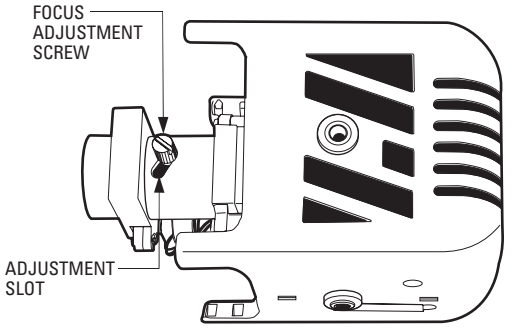


Figure 13. Focus Adjustment

2. Move the screw in the slot to bring the picture into focus.
3. Retighten the locking screw.
4. Replace the heater board if it was removed.
5. Reconnect the four-pin heater connector if you are using the heater.

HEATER BOARD REMOVAL

To remove the heater board, do the following:

1. Disconnect the four-pin heater connector (red, orange, and black wires) if it is plugged in.

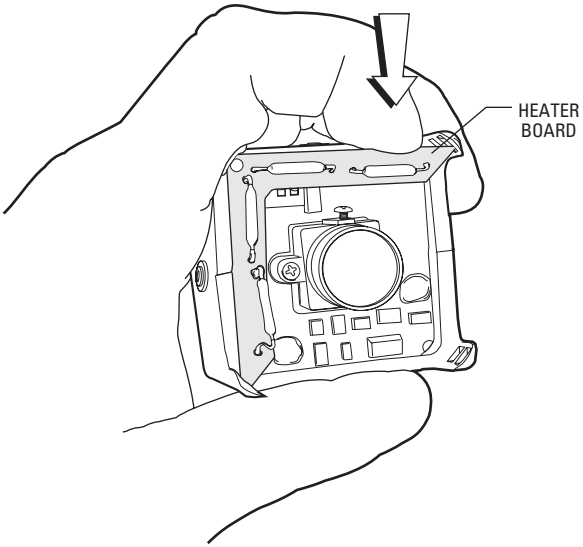


Figure 14. Removing Heater Board

2. Wait for the heater elements to cool if they are hot.
3. Apply pressure and press on the corner of the board.

⚠ **WARNING:** Heater elements could be hot! When camera power is on, use caution when adjusting the camera.

SWITCH SETTINGS FOR FIXED FOCAL LENGTH LENS WITH AUTO IRIS

Refer to Figure 15. The switch is located next to the lens. Automatic backlight compensation (factory setting) is used under varying lighting conditions (such as outdoors) or fixed lighting conditions where there are no bright spots that darken other picture details. Manual backlight compensation is used in fixed lighting conditions to optimize the picture detail when there are bright spots.

ALC/ELC switch:	Always ALC
Y/DC switch:	Always DC
Auto backlight compensation:	BLC switch OFF ABL switch ON
Manual backlight compensation:	BLC switch ON ABL switch OFF

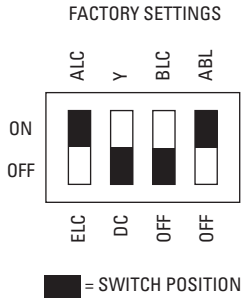


Figure 15. Switch Settings for Fixed Lens with Auto Iris

SWITCH SETTINGS FOR FIXED FOCAL LENGTH LENS WITHOUT AUTO IRIS

Refer to Figure 16. The switch is located next to the lens. Automatic backlight compensation (factory setting) is used under varying lighting conditions (such as outdoors) or fixed lighting conditions where there are no bright spots that darken other picture details. Manual backlight compensation is used in fixed lighting conditions to optimize the picture detail when there are bright spots.

ALC/ELC switch:	Always ELC
Y/DC switch:	Not used
Auto backlight compensation:	BLC switch OFF ABL switch ON
Manual backlight compensation:	BLC switch ON ABL switch OFF

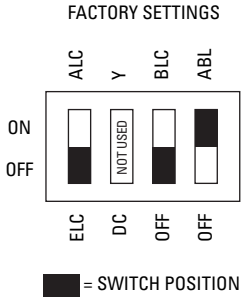


Figure 16. Switch Settings for Fixed Lens Without Auto Iris

SWITCH SETTINGS FOR VARIFOCAL LENS

The high resolution camera with varifocal lens and auto iris is configured at the factory for automatic exposure.

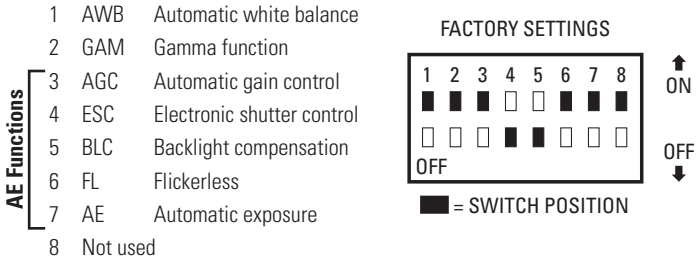


Figure 17. Switch Settings for Varifocal Lens

For manually setting and locking the white balance

Place a white background in front of camera and turn off switch 1.

For gamma correction

Switch to accurately reproduce scene brightness; when turned on, y = 0.6, and when turned off, y = 1.0.

For automatic exposure

Turn on switch 7, and then turn on/off switch 3 for AGC, switch 4 for electronic shutter control, switch 5 for backlight compensation, and switch 6 for flickerless motion.

For manual exposure and to enable auto iris

Turn off switch 7; set switch 3 on to increase the gain by 6 dB or off to increase the gain by 18 dB; set switches 4, 5, and 6 for the desired shutter speed.

⚠ **WARNING:** Do not change the shutter speed unless you understand how changing the settings will affect the scene detail.

Table A. Varifocal Lens Shutter Speed Settings

Shutter Speed	Switch Number and Position			
	7	6	5	4
1/60 (NTSC) 1/50 (PAL)	Off	On	On	On
1/100		Off	On	On
1/250		On	Off	On
1/500		Off	Off	On
1/1000		On	On	Off
1/2000		Off	On	Off
1/4000		On	Off	Off
1/10000		Off	Off	Off

Specifications

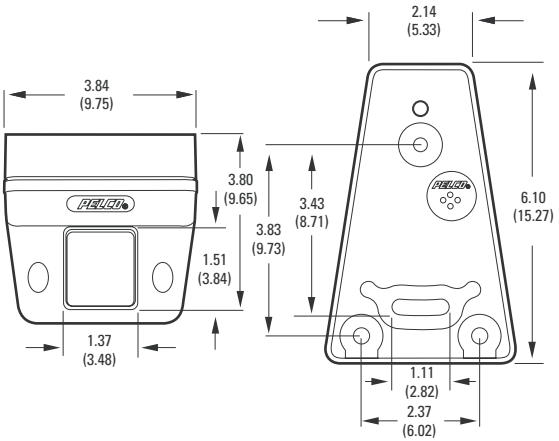
General

Pan/Tilt Adjustment	Manual; 5° above horizontal to 20° below horizontal tilt; 24° pan adjustment when using the adjustable mounting pattern in base
Rating	Meets NEMA Type 4X and IP66 standards
Construction	Aluminum mounting plate, base, and cover, steel camera mounting bracket
Finish	Gray polyester powder coat
Dimensions	3.75" H x 3.75" W x 6.20" L (9.53 x 9.53 x 15.70 cm)
Operating Temperature	-50° to 122°F (-46° to 50°C) De-ices to 25°F (-4°C)
Heater	Turns on at 50°F (10°C) and off at 80°F (27°C)
Environment	Low temperature, indoor/outdoor
Unit Weight	1.25 lb (0.57 kg)

Electrical

Input Voltage	12 VDC or 24 VAC, ±10%
Power Consumption	13 watts or less
Video Connector	BNC

(Design and product specifications subject to change without notice.)



Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C2491M	6/05	Orginal version.
C2491M-A	7/05	Revised per new camera shell design for varifocal lens.
C2491M-B	10/05	Revised switch-setting descriptions for varifocal lens.
C2491M-C	1/06	Revised factory switch settings for varifocal lens. Updated wiring information.
C2491M-D	8/06	Updated mounting plate artwork and text. Removed safety instructions; added separate multilingual document.

PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Three years on PMCL 200/300/400 Series LCD monitors.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Two years (except lamp and color wheel) on Digital Light Processing (DLP®) displays. The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, Endura™ Series distributed network-based video products, and TW3000 Series twisted pair transmission products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department
Pelco
3500 Pelco Way
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco
3500 Pelco Way
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors
473 Eccles Avenue
South San Francisco, CA 94080 USA
Phone: 650-737-1700
Fax: 650-737-0933

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